



## Entry modes in reshoring strategies: An empirical analysis

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### ABSTRACT

The Entry Mode (EM) choice is a fundamental issue in reshoring initiatives. Despite several authors have studied the determinants of offshoring EM, no study has investigated so far the factors affecting the reshoring EM and its relation with the offshoring EM. The purpose of this paper is to examine which factors influence entry mode choice in reshoring initiatives. We develop a conceptual framework that explains the reshoring EM in terms of country-, industry-, firm- and project-specific factors, in addition to the offshoring EM choice. Next, we test this model by using a sample of 677 cross-industry and cross-country reshoring projects. Based on the results, we find that offshoring EM significantly constrains the subsequent reshoring EM. More in detail, firms adopting offshore insourcing entry modes tend to retain these modes in reshoring. Furthermore, reshoring EM is explained by industry- and project-specific factors, while offshoring EM is influenced by a broader set of industry-, country-, and firm-specific factors. This study fills a gap in the reshoring literature by analysing influential factors in EM choice and by offering a comparison between the determinants of offshoring and reshoring EM.

### 1. Introduction

Over the past decades, offshoring strategies, i.e., the relocation of production processes to foreign countries, has been frequently undertaken by companies in international business (Bals et al., 2013; Hättönen and Eriksson, 2009; Holcomb and Hitt, 2007; Lewin and Peeters, 2006). However, in recent years the political and economic changes on the global chessboard, the thinning of location advantages in some low-cost countries, and the growing awareness of the “total cost” of offshoring have driven many companies to re-think the location of their international value chains. Previously offshored operations have been relocated to countries closer to the firm’s headquarters or even to the domestic context. This phenomenon is referred to as “reshoring”, i.e., “a voluntary corporate strategy regarding the home-country’s partial or total re-location of (in-sourced or out-sourced) production to serve the local, regional or global demands” (Fratocchi et al., 2014, p. 56). Although other labels have also been applied (e.g., back-shoring, back-reshoring), the term “reshoring” shall be adopted in this paper.

The popular press (e.g., New York Times, The Economist) and well-known consulting firms (e.g., Boston Consulting Group) have highlighted reshoring cases of manufacturing giants such as General Electric, Boeing, Bosch, and Philips, although the phenomenon has been observed also in companies of smaller size and in different

industries and countries. At the political level, some governments are striving to revitalise manufacturing and increase employment by promoting reshoring. As an example, for the first time in decades the United States registered in 2016 a net gain of more than 25,000 jobs, due also to effective US reshoring policies (Reshoring Initiative Report, 2017).

Despite the social and policy relevance of reshoring, academic research is still relatively limited (Fratocchi et al., 2016; Martínez-Mora and Merino, 2014; Stentoft et al., 2016). Key questions relate to *why* to reshore, *where* to move, as well as *how* to implement the reshoring decision in practice (Fratocchi et al., 2015). Several authors (e.g., Gray et al., 2017; Wiesmann et al., 2017) have addressed the “*why*” question and identified an array of multi-level (e.g., firm-specific, country-specific, industry-specific) drivers. Amongst the most frequently cited motivations are the reduction of the cost gap between the offshore and home countries, the poor quality of production offshore, “made-in” advantages of the home country, and government incentives (Arik, 2013; Fratocchi et al., 2016; Kinkel, 2012; Stentoft et al., 2016). Some studies focus on the “*where*”, analysing the geography of reshoring processes and location determinants (Elram, 2013; Gylling et al., 2015; Tate et al., 2014). The “*how*” question, and especially the EM choice, is the least studied in the reshoring literature (Wiesmann et al., 2017). Since location and governance interact to create value (Mudambi and

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Venzin, 2010), firms need to re-evaluate and adapt their location and outsourcing decisions.

EM stands for the governance form that companies adopt to gain access (i.e., entry or re-entry) into a market. EMs range from the wholly owned subsidiary (WOS) to contractual agreements with independent suppliers, and are generally clustered in two major types: equity (insourcing or captive) and non-equity (outsourcing) modes (Pan and Tse, 2000). The strategic relevance of the EM choice is evident when considering its implications for firms' resources, degree of control and risks, switching costs, and performance (Hill et al., 1990; Lu, 2002; Perks et al., 2013; Zhao et al., 2017). Therefore, firms' EMs in foreign markets represent a key research stream in international business (IB) research (Shaver, 2013). This literature – certainly relevant for the purposes of this study – focuses however on offshoring EMs, i.e., choices that develop in a decision-making context different from that of reshoring. By definition, reshoring is the reverse decision of a previous decision to offshore. The outcomes, the learning effects, and the tangible and intangible investments already made during the offshore experience are likely to influence the reshoring decisions, including the EM choice.

This study addresses the following two research questions:

- (1) Which factors influence the reshoring EM choice?
- (2) What are the differences between the factors affecting the reshoring EM choice and those affecting the offshoring EM choice?

Building on the IB and reshoring literature, this study proposes a conceptual framework that explains the reshoring EM in terms of industry-, country-, firm- and project-specific factors, in addition to the EM choice in the first step (offshoring). This model is tested on a sample of 677 manufacturing reshoring projects. Part of the data comes from the European Monitor of Reshoring, an observatory managed by a research team that includes the authors, on behalf of the European Commission. Given the increasing interest in the reshoring phenomenon, and considering the lack of literature on a key decision such as the EM choice, we believe that this study may provide significant implications for theory, practice, and industrial policy.

The remainder of this paper is structured as follows. We present the literature background and the conceptual framework. We describe the methodology (data collection, sample description, data analysis). The main results are then illustrated and discussed. Finally, we conclude the paper by highlighting its contribution to theory and practice and by pointing out limitations and future research directions.

## 2. Literature background and conceptual framework

Our starting point for developing the research questions set forth above is the contribution of Gray et al. (2013). By combining location decisions (off- vs. re-shoring) and make-buy decisions (in- vs. outsourcing), Gray et al. (2013) trace back reshoring paths to the following four sequences of EM choices (Fig. 1): a) *In-House reshoring*, when companies relocate manufacturing activities from offshore wholly

owned facilities back to wholly owned facilities in the home country; b) *Reshoring for outsourcing*, when companies relocate manufacturing activities from offshore wholly owned facilities back to home based suppliers; c) *Reshoring for insourcing*, when companies relocate manufacturing outsourced to offshore suppliers back to wholly owned facilities in the home country; d) *Outsourced reshoring*, when companies relocate manufacturing activities performed by offshore suppliers back to home based suppliers.

What factors influence the adoption of the aforementioned four strategies (paths)? Since EMs represent a key field in IB (Werner, 2002), this literature can shed light on the main factors that influence the EM choice, although its focus is on offshoring rather than reshoring decisions. Section 2.1 provides a summary of this literature.

A second important stream of literature, mainly rooted in operations management, is that specifically devoted to reshoring. This literature focuses on the motivations for reshoring and deals only marginally with the theme of EMs. However, motivations and EMs appear to be conceptually linked (Benito, 2015; Di Mauro et al., 2018). For example, when offshoring is motivated by the intention to exploit ownership advantages such as proprietary knowledge, the risk of infringements experienced in outsourcing agreements with foreign suppliers may lead to equity-based solutions. Section 2.2 provides a summary of the literature on reshoring motivations.

Building on the findings of these two literature streams and on their theoretical underpinnings, Section 2.3 illustrates the “conceptual framework”.

### 2.1. Antecedents/determinants of entry modes

The question of how firms enter and operate in foreign markets has been a mainstream topic in international business research for decades (Canabal and White, 2008; Hennart and Slangen, 2015; Schellenberg et al., 2017). Several authors have contributed to this debate by conceptualising/defining the different EMs and their main features, by shedding light on the antecedents/determinants of EMs, and by exploring the EM-performance relationship. Despite the wide and heterogeneous set of EMs, most studies analyse and compare antecedents/determinants of equity (i.e., insourcing) vs. non-equity (i.e., outsourcing) EMs (Pan and Tse, 2000; Canabal and White, 2008). In this section, we provide an overview of this literature and its theoretical underpinnings. A more detailed/systematic review of this research field can be found in the recent reviews/meta-analyses on antecedents/determinants of EMs (i.e., Brouthers and Hennart, 2007; Canabal and White, 2008; Sarkar and Cavusgil, 1996; Schellenberg et al., 2017; Zhao et al., 2004) or on EM-performance relationship (Zhao et al., 2017).

Four groups of EM antecedents/determinants have been identified in the literature (Luo, 2001): *industry-* (e.g., market potential, technology specialisation), *firm-* (e.g., firm size, experience and capabilities), *country-* (e.g., cultural distance, political risk) and *project-specific* factors (e.g., motives of market entry). The theoretical frameworks most frequently adopted to explain the antecedents/determinants include transaction cost theory (TCT), resource-based view (RBV), institutional theory, eclectic paradigm, and the Uppsala internationalisation model (Schellenberg et al., 2017). We summarise these theoretical frameworks in Table 1, highlighting their key assumptions/concepts and their adoption in EM studies.

The main *industry-*specific antecedents of EMs analysed in the literature are asset specificity and industry concentration. Both TCT and empirical EM studies suggest that asset specificity significantly affects the EM choice (Brouthers and Brouthers, 2003). More specifically, non-equity EMs are preferred in low asset specificity sectors – such as clothing – since transaction costs created by potential opportunism are lower (Delios and Beamish, 1999; Gatignon and Anderson, 1988; Lane and Probert, 2006). Similarly, in a highly concentrated market, internalisation is more attractive, as transaction costs of external cooperation are higher than those of hierarchical coordination (Gomes-

		To: Reshore	
		In-House	Outsourced
From: Offshore	In-House	In-House Reshoring (IN-IN)	Reshoring for Outsourcing (IN-OUT)
	Outsourced	Reshoring for Insourcing (OUT-IN)	Outsourced Reshoring (OUT-OUT)

Fig. 1. Reshoring strategies (paths) (adapted from Gray et al., 2013).

**Table 1**

Theoretical frameworks explaining the EM choice (adapted from Andersen, 1997; Canabal and White, 2008; Schellenberg et al., 2017; Surdu and Mellahi, 2016).

Theory	Key assumptions / concepts	Adoption in EM studies (examples)
Transaction cost theory (TCT)	The rationality of actors is limited and their behaviour may be opportunistic. The proper form for governing transactions is influenced by assets specificity, uncertainty, and frequency.	Firms adopt EMs which minimise production and transaction costs. EM choice is affected by asset specificity, uncertainty, and need to protect brand name (Anderson and Gatignon, 1986; Zhao et al., 2004).
Resource-based view (RBV)	Firms are bundles of tangible and intangible resources/capabilities (assets, knowledge, and capabilities). To provide sustainable competitive advantage, these resources/capabilities should be valuable, rare, imperfectly imitable, and non-substitutable.	Firms with distinctive resources/capabilities (e.g., proprietary technologies, tacit know-how, extensive geographic-industry experience) tend to adopt equity EMs (Brown et al., 2003; Ekeledo and Sivakumar, 2004; Mutinelli and Piscitello, 1998).
Institutional theory	Organisations must conform to the rules and beliefs prevailing in the environment. Coercive, mimetic and normative pressures generate institutional isomorphism.	EM decisions are affected by coercive, mimetic and normative forces (Canabal and White, 2008; Davis et al., 2000; Yiu and Makino, 2002).
Eclectic paradigm	The propensity of firms to engage in foreign production depends upon Ownership, Location, and Internalisation (OLI) advantages.	EM decisions are based on the analysis of Ownership (e.g., intangible assets, skills, new products), Location (e.g., institutional or productive factors available in a geographic area), and Internalisation (e.g., transaction and coordination costs) factors (Schellenberg et al., 2017).
Uppsala internationalisation model	Firms: a) tend to internationalise first to geographically close countries and gradually move to more psychically distant markets; b) start from a low resource commitment mode and move to higher commitment modes as knowledge and experience rise.	EM decisions are affected by the experience of the company in the foreign country and the cultural distance between the home and host country (Arora and Fosfuri, 2000; Blomstermo et al., 2006; Mutinelli and Piscitello, 1998).
Path dependence	History matters: initial decisions can restrain present and future choices. Examples of self-reinforcing mechanisms that narrow the range of (managerial) discretion are: economies of scale and scope, network externalities, learning effects, durability of capital equipment, technical interrelatedness.	Firms tend to adopt the same EM adopted in previous locations (Amburgey and Miner, 1992).

Casseres, 1990).

With regard to *firm-specific* antecedents, RBV theory predicts that firms that possess distinctive resources/capabilities (e.g., proprietary technologies, tacit know-how, specialised assets, reputation) tend to select EMs with higher level of control/equity. This hypothesis is empirically supported by some EM studies (e.g., Brown et al., 2003; Ekeledo and Sivakumar, 2004; Mutinelli and Piscitello, 1998). Similarly, SMEs, which are usually characterised by fewer resources and capabilities, tend to select non-equity entry modes, in particular when environmental uncertainty is high (Bradley and Gannon, 2000; Brouthers and Nakos, 2004; Li and Qian, 2008). However, Shrader et al. (2000) highlight that, consistent with Dunning's eclectic paradigm, SMEs will adopt equity EMs whenever they have significant ownership and/or locational advantages (e.g., proprietary technologies to be protected).

The predicted effects of *home and host country* on EM choice can be subdivided into host country influence, home country influence, and distance between the two countries. The host and home country influences are mainly due to institutions and legislation, industrial profile of the country, availability of a local supply basin, market attractiveness, and logistics infrastructures (Morschett et al., 2010; Schellenberg et al., 2017). With reference to the institutional setting, Uhlenbruck et al. (2006) highlight that if corruption in the host country is pervasive, firms tend to select non-equity EMs. Similarly, Brouthers (2002) shows that firms entering countries with legal restrictions on EMs (such as China) tend to use non-equity EMs. Although the main focus of the literature on EM determinants is on the effect of distance (cultural, psychic, or geographical) between the home and the host country, there is still open debate on this issue. Some scholars (Arora and Fosfuri, 2000; Hennart and Larimo, 1998; Kogut and Singh, 1988) find that firms tend to select non-equity EMs when distance is high. However, the significance of this effect is not confirmed by the meta-analysis of Tihanyi et al. (2005).

Some studies consider the motivations of market entry as project-specific antecedents/determinants of EMs. For instance, Dunning's (1988) eclectic paradigm identifies four main sets of motives for

entering a foreign market: resource-seeking, market-seeking, efficiency-seeking, strategic-asset seeking. EM scholars find that global strategic motivations (such as setting up a strategic outpost for future international expansion, developing a global sourcing site, attacking actual or potential global competitors) increase the likelihood of equity EMs (e.g., Kim and Hwang, 1992; Rajan and Pangarkar, 2000). Similarly, Tsai and Cheng (2002) show that market-seeking motivations (in particular host sales market expansion) lead to equity EMs.

Finally, there is evidence that companies tend to replicate the same EM adopted in previous locations (e.g., Benito et al., 2009; Chang and Rosenzweig, 2001; Swoboda et al., 2015). This result aligns with the path dependence concept introduced by David (1985) and Arthur (1994) to explain the adoption and diffusion of technological standards, and subsequently frequently adopted in internationalisation studies (see among others, Araujo and Rezende, 2003; Eriksson et al., 2000; Hutzschenreuter et al., 2007). Path dependence – i.e., the tendency to repeat the initial choices in the future – is due to self-reinforcing (or positive feedback) mechanisms, such as economies of scale and scope, network externalities, learning effects, and coordination effects (Arthur, 1994; David, 1985). From a theoretical point of view, it can be traced back to the knowledge-based theory of the firm as well as to the institutional theory (Swoboda et al., 2015). As far as the former is concerned, Padmanabhan and Cho (1999) emphasise that positive EM experiences lead to growing knowledge and confidence in the continued use of the same mode (mode learning). As for the latter, internal cognitive pressures, such as firms'/managers' habitual behaviours and repeated actions (Berger and Luckmann, 1967), encourage consistency in EM choices.

## 2.2. Reshoring drivers/motivations

As argued in the previous section, the motivations of market entry are often seen as a determinant of the offshoring EM choice (e.g., Kim and Hwang, 1992; Rajan and Pangarkar, 2000). Although studies on reshoring neglect the EM topic and therefore do not explicitly link reshoring motivations with EMs (with the exception of Di Mauro et al.,

2018), it seems useful to consider the stream of literature focused on reshoring drivers/motivations.

In their systematic review, Stentoft et al. (2016) identify seven categories of drivers: cost, e.g., labour costs, logistics costs, coordination/transaction costs, energy costs (Bailey and De Propris, 2014; Pearce, 2014; Tate, 2014); quality (Canham and Hamilton, 2013; Gylling et al., 2015; Kinkel, 2014); time and flexibility, e.g., delivery lead-time, demand volatility, production and delivery reliability (Arlbjørn and Mikkelsen, 2014; Fratocchi et al., 2014; Martínez-Mora and Merino, 2014); access to skills and knowledge, e.g., proximity to R&D resources, availability of skilled labour (Kinkel, 2014); risks, e.g., threat of losing know-how and intellectual property, supply chain risks (Gray et al., 2013; Moser, 2013; Tate, 2014); market, e.g., loyalty/patriotism and “made-in” effect (Canham and Hamilton, 2013; Di Mauro et al., 2018); and other factors, e.g., government incentives, focus on core activities (Moser, 2013; Pearce, 2014; Tate et al., 2014). Fratocchi et al. (2016) propose, and subsequently empirically validate (Di Mauro et al., 2018), another classification of motivations grounded in TCT and RBV and based on two dimensions: the goal (i.e., cost efficiency vs. customer perceived value) and the level of analysis (internal environment vs. external environment). Similarly, Foerstl et al. (2016) classify reshoring drivers through a three-levels framework based on TCT and organisational buying behaviour (OBB). Wiesmann et al. (2017) identify five different sets of dynamics or clusters of reshoring drivers: global competitive dynamics, home country, host country, supply chain and firm-specific.

Conversely, the implementation of reshoring projects is significantly under-researched in the literature (Fratocchi et al., 2015; Wiesmann et al., 2017), providing for instance no indication of the antecedents/determinants of reshoring EMs.

### 2.3. Conceptual framework

Building on extant literature, we propose a conceptual framework to explore the antecedents/determinants of reshoring EMs. Specifically, we argue that reshoring EMs are determined by industry- (e.g., the industry in which the company operates), firm- (e.g., firm size), country- (e.g., home and host country, cultural distance), and project-specific factors (e.g., reshoring motivations), as well as by the EM adopted in the offshore location (Fig. 2).

## 3. Methodology

### 3.1. Data

In order to analyse the determinants of reshoring entry strategies, we developed a database using secondary data extracted from newspapers and magazines. Secondary data have been acknowledged as an appropriate source of information for research and used both in

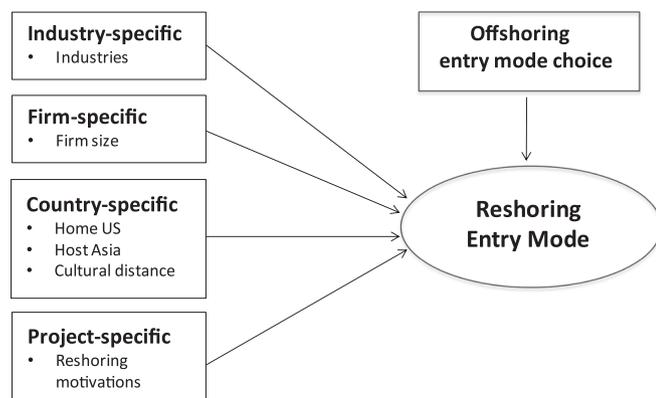


Fig. 2. Conceptual framework.

international business and in operations management (Roth et al., 2008; Yang et al., 2006). This kind of data has been argued to be particularly useful when no other sources are available (Cowton, 1998; Franzosi, 1987; Mazzola and Perrone, 2013), as it is often the case for the reshoring phenomenon (Ancarani et al., 2015).

Data was collected from 2011 to the end of 2016 from a wide range of sources by using a comprehensive keyword search: “Reshoring”, “Back-reshoring”, “Backshoring” “Back-shoring”, “Inshoring”, “Inshoring”, “Nearshoring”, “Near-reshoring”, “Onshoring”, “On-shoring”, “Production relocation”, “Production repatriation”, and “Relocalisation”. Information was searched from the historical archives of the following business newspapers, national-level newspapers, and business magazines: Wall Street Journal, Financial Times, Forbes, USA Today, The Economist, Time, Bloomberg Business Week, ABC news, BBC news, Spiegel online, Il Sole 14 Ore. In addition, white papers from major consulting firms (Boston Consulting Group, McKinsey, Accenture, Grand Thornton, AlixPartners, Pambianco, Pricewaterhouse Coopers, Stanton Chase) were also searched and analysed. Finally, advanced online searches were performed through the Google search engine adopting the same keywords, in order to ensure that no news of reshoring projects was omitted and to improve and supplement information from other sources. With respect to US companies, the Reshoring Initiative website ([www.reshorennow.org](http://www.reshorennow.org)) was consulted to ensure that no relevant US reshoring project was missing.

The unit of analysis was the single reshoring project. For instance, if the same company reshores production from two different host countries, this is considered as two reshoring projects. For each reshoring case, we collected data on firm size, industry, headquarters location, offshoring and reshoring countries, cultural distance between home and host country, year of offshoring and of reshoring, duration of stay abroad, offshoring and reshoring EMs (i.e., outsourcing vs. insourcing) and reshoring motivations (if available). As far as firm size is concerned, we classified companies into two categories (i.e., small and medium vs. large) based on the number of employees and revenues, following a recommendation of the European Union Commission (2003/361/EC). With regard to the industry, we classified firms into seven groups based on Standard Industrial Classification (SIC) codes: clothing, electronics, mechanical, automotive, home appliance, furniture, food and other sectors. Cultural distance between home and host countries was measured using Kogut and Singh's (1988) index, which measures the deviation along each of the six Hofstede's (1980) cultural dimensions (i.e., power distance, individualism, masculinity, uncertainty avoidance, long term orientation, indulgence). Despite criticism by some authors (e.g., Beugelsdijk et al., 2015; Shenkar, 2001), this index has been increasingly adopted (Harzing and Pudelko, 2015). Finally, motivations were coded based on an extensive review of the reshoring literature (see Fratocchi et al., 2016).

The original database contained 747 reshoring cases. In order to avoid misinterpretation, each observation was reviewed and cross-validated initially by two independent researchers within the group. A third researcher was involved in the few cases of disagreement (less than 5%). Due to missing data or unreliable information, 70 cases were removed. This led to a final database containing 677 cases having complete and reliable information about both the offshoring and reshoring EMs.

### 3.2. Descriptive statistics

As shown in Table 2, reshoring cases included in our dataset spread across a wide range of manufacturing sectors. The four sectors with the highest number of cases are clothing (16.7%), electronics (16.4%), mechanical (15.7%) and automotive (11.7%). Considering firm size, SMEs account for 263 out of 677 (38.8% of the cases), while large firms account for 352 out of 677 (52.0% of the cases). Regarding the home country, US- and EU-based companies are almost equally represented in our sample (46.2% and 50.2%, respectively). With regard to the host

**Table 2**  
Sample characteristics<sup>a</sup>.

	Offshoring – Reshoring entry mode									
	All (N = 677)		OUT-OUT (N = 138)		OUT-IN (N = 137)		IN-IN (N = 399)		IN-OUT (N = 3)	
<b>Industry</b>										
Clothing	113	16.7%	53	38.4%	30	21.9%	28	7.0%	2	66.7%
Electronics	111	16.4%	25	18.1%	18	13.1%	68	17.0%	–	–
Mechanical	106	15.7%	9	6.5%	18	13.1%	79	19.8%	–	–
Automotive	79	11.7%	11	8.0%	18	13.1%	50	12.5%	–	–
Home appliance	35	5.2%	3	2.2%	7	5.1%	25	6.3%	–	–
Furniture	34	5.0%	6	4.3%	10	7.3%	18	4.5%	–	–
Chemical	27	4.0%	1	0.7%	6	4.4%	20	5.0%	–	–
Food	26	3.8%	2	1.4%	2	1.5%	22	5.5%	–	–
Other	146	21.6%	28	20.3%	28	20.4%	89	22.3%	1	33.3%
<b>Firm size</b>										
Small and Medium	263	38.8%	67	48.6%	74	54.0%	121	30.3%	1	33.3%
Large	352	52.0%	46	33.3%	46	33.6%	259	64.9%	1	33.3%
<b>Home country</b>										
Home US	313	46.2%	75	54.3%	75	54.7%	162	40.6%	1	33.3%
Home EU	340	50.2%	63	45.7%	58	42.3%	217	54.4%	2	66.7%
<b>Host country</b>										
Host Asia (including China)	396	58.5%	118	85.5%	111	81.0%	165	41.1%	2	66.7%
Host China	331	48.9%	103	74.6%	90	65.7%	136	34.1%	2	66.7%
<b>Reshoring motivations</b>										
Logistic costs	134	19.8%	30	21.7%	32	23.4%	71	17.8%	1	33.3%
Quality issues	117	17.3%	39	28.3%	28	20.4%	49	12.3%	1	33.3%
Made-in effect	114	16.8%	27	19.6%	32	23.4%	54	13.5%	1	33.3%
Labour costs' gap reduction	100	14.8%	20	14.5%	18	13.1%	61	15.3%	1	33.3%
Customer proximity	99	14.6%	22	15.9%	23	16.8%	53	13.3%	1	33.3%
Total costs	98	14.5%	34	24.6%	17	12.4%	47	11.8%	–	–
Delay in delivery	93	13.7%	35	25.4%	27	19.7%	30	7.5%	1	33.3%
Government incentives	67	9.9%	2	1.4%	17	12.4%	47	11.8%	1	33.3%

<sup>a</sup> In some cases, percentages do not sum up to 100% due to missing values or approximation. Furthermore, more than one reshoring motivation have been sometimes identified for each case.

**Table 3**  
Factors affecting the reshoring EM choice (outsourcing = 0; insourcing = 1).

	Reshoring entry mode (N = 677)					
	Model 1		Model 2		Model 3	
	Coefficient (b)	Std. error	Coefficient (b)	Std. error	Coefficient (b)	Std. error
Clothing	–1.465***	0.300	–1.572***	0.323	–0.923 <sup>†</sup>	0.380
Electronics	–0.269	0.327	–0.171	0.345	–0.262	0.419
Mechanical	0.535	0.410	0.745	0.430	0.652	0.498
Automotive	0.041	0.436	–0.006	0.463	0.352	0.531
Large	0.482 <sup>†</sup>	0.237	0.455	0.259	–0.076	0.309
Home US	–0.176	0.263	–0.323	0.279	–0.182	0.332
Host Asia	–1.679***	0.341	–1.597***	0.359	–0.394	0.436
Cultural distance	–0.010	0.020	–0.008	0.021	–0.027	0.028
Logistic costs	–	–	0.437	0.329	0.175	0.369
Made-in effect	–	–	0.104	0.315	0.197	0.352
Quality issues	–	–	–0.509	0.291	–0.491	0.336
Labour costs' gap reduction	–	–	0.441	0.363	–0.004	0.443
Delay in delivery	–	–	–0.811**	0.312	–0.436	0.354
Total costs	–	–	–0.510	0.321	–0.671	0.403
Customer proximity	–	–	0.379	0.331	0.001	0.393
Government incentives	–	–	1.943**	0.638	1.303	0.698
Offshoring entry mode	–	–	–	–	4.741***	0.740
Constant	2.985***	0.428	2.947***	0.455	1.300 <sup>†</sup>	0.593
–2log likelihood	485.874		452.991		315.915	
Cox and Snell R <sup>2</sup>	0.151		0.195		0.356	
Nagelkerke R <sup>2</sup>	0.245		0.317		0.579	

\* p < 0.05.

\*\* p < 0.01.

\*\*\* p < 0.001.

country, 58.5% of companies returned from Asia and among them 48.9% from China. While a set of 26 motivations were identified, we considered in Table 2 and in the subsequent analyses only those quoted by at least 67 cases (~10% of the sample).

### 3.3. Data analysis

The first goal of our paper was to shed light on the factors influencing the reshoring EM choice. To this end, we employed a binary

logistic regression model to test the conceptual framework (Fig. 2). The dependent variable (i.e., the reshoring EM) was operationalised through a binary variable, taking value zero for outsourcing (non-equity) and one for insourcing (equity). The independent variables were operationalised through binary variables too (*clothing, electronics, mechanical, and automotive* for industry; *large firms* for firm size; *home US* for home country; *host Asia* for host country; *logistic costs, made-in effect, quality issues, labour costs gap reduction, delay in delivery, total costs, customer proximity, and government incentives* for reshoring motivations). Kogut and Singh's (1980) index was used to measure cultural distance. The resulting logit equation was:

$$Y_i = \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 X_{i5} + \beta_6 X_{i6} + \beta_7 X_{i7} + \varepsilon_i \quad (1)$$

( $Y_i$  = reshoring EM,  $X_1$  = industry,  $X_2$  = firm size,  $X_3$  = home country,  $X_4$  = host country,  $X_5$  = cultural distance,  $X_6$  = reshoring motivations,  $X_7$  = offshoring entry mode)

Likewise, the coefficients for the factors affecting the offshoring EM (i.e., insourcing vs. outsourcing) were estimated through a logit equation (Eq. (2)) analogous to the one for the reshoring EM, but for offshoring motivations and the previous EM, which were not available:

$$Z_i = \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 X_{i5} + \varepsilon_i \quad (2)$$

( $Z_i$  = offshoring EM;  $X_1$  = industry,  $X_2$  = firm size,  $X_3$  = home country,  $X_4$  = host country,  $X_5$  = cultural distance)

#### 4. Results

Table 3 shows the results of the binary logistic regression on the factors affecting the reshoring EM choice for the entire sample (N = 677). A step-wise approach was applied, whereby three different models were estimated: Model 1 encompasses only country-, industry-, and firm-specific variables; Model 2 adds project-specific variables, i.e., reshoring motivations. Finally, Model 3 brings in the effect of the offshore EM. The correlation matrix and variance inflation factors for Model 3 (all lower than 2) suggest that multi-collinearity is not an issue (Allison, 1977, 2012). The estimated logit model shows that in Model 1 and 2, there are significant effects for firm size (large firms are more likely to enter the reshoring location through a captive mode), country (firms that had offshored to an Asian country are more likely to use reshoring outsourcing), and project-specific variables (firms reshoring because of delivery problems seek external suppliers domestically while the provision of government incentives promotes in house production). However, in Model 3 the choice of the reshoring EM is significantly affected only by the industry (clothing industry  $\beta = -0.923$ ,  $P < 0.05$ ) and, above all, by the previous EM in the offshore location ( $\beta = 4.741$ ,  $P < 0.001$ ). All other explanatory variables are statistically insignificant. This result not only hints that the offshoring EM tends to be replicated, but also that the offshore EM may be linked to firm's and industry-specific characteristics.

In order to get a deeper understanding of the effect of the previous offshoring EM, we mapped the offshoring and reshoring EMs of the analysed reshoring projects (Fig. 3).

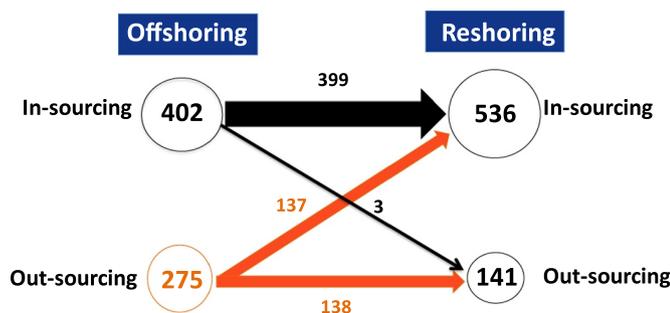


Fig. 3. Reshoring strategies frequency distribution.

Table 4

Factors affecting the reshoring EM choice after offshore outsourcing (outsourcing = 0; insourcing = 1).

Reshoring entry mode Sub sample		
(N = 275)		
	Coefficient (b)	Std. error
Clothing	-0.879 <sup>*</sup>	0.391
Electronics	-0.298	0.433
Mechanical	0.630	0.509
Automotive	0.298	0.545
Large	-0.080	0.316
Home US	-0.134	0.342
Host Asia	-0.435	0.454
Cultural distance	-0.031	0.030
Logistic costs	0.112	0.375
Made-in effect	0.260	0.359
Quality issues	-0.567	0.347
Labour costs' gap reduction	-0.009	0.456
Delay in delivery	-0.290	0.357
Total costs	-0.700	0.417
Customer proximity	0.108	0.404
Government incentives	1.831 <sup>†</sup>	0.624
Constant	1.320 <sup>†</sup>	0.624
-2 log likelihood	289.282	
Cox and Snell R <sup>2</sup>	0.124	
Nagelkerke R <sup>2</sup>	0.166	

\*\* p < 0.01.

\*\*\* p < 0.001.

\* p < 0.05.

Fig. 3 shows that, out of 402 cases that had selected offshore insourcing, 399 confirmed this EM in reshoring (*in-house reshoring strategy, IN-IN*). Only three firms switched from insourcing to outsourcing (*reshoring for outsourcing strategy, IN-OUT*). Conversely, companies that had chosen outsourcing in the offshore location almost equally distributed between *reshoring for insourcing strategy (OUT-IN, 137 cases)* and *outsourced reshoring strategy (OUT-OUT, 138 cases)*. A Chi-Square test (asymptotic significance  $P < 0.001$ ) shows a significant relationship between reshoring and offshoring EM. To shed light on the factors affecting the decision to switch from an outsourcing EM in the offshore location to an insourcing mode in reshoring (i.e., from *OUT-IN* to *OUT-OUT*), we restricted our sample to the 275 cases that had adopted an offshoring outsourcing EM, and re-estimated Eq. (1) omitting the offshoring EM from the explanatory variables (Table 4). Multi-collinearity was not an issue also in this case. This analysis highlighted that companies belonging to the clothing industry ( $\beta = -0.879$ ,  $P < 0.05$ ) are more likely to maintain an outsourcing EM also in reshoring (*OUT-OUT*). As far as project variables are concerned, we found that when reshoring is due to government incentives, the *reshoring for insourcing (OUT-IN)* strategy tends to be selected ( $\beta = 1.831$ ,  $P < 0.05$ ). No other firm-specific, country-specific and cultural distance variables appear to have significant effects.

Finally, Eq. (2) was estimated to identify the factors affecting the offshoring EM choice (Table 5). This analysis shows that companies belonging to clothing and automotive industries are more likely to opt for offshore outsourcing rather than insourcing ( $\beta = -1.656$ ,  $P < 0.01$  and  $\beta = -0.647$ ,  $P < 0.05$ , respectively). Considering firm-specific factors, large firms exhibit a higher propensity to select offshore insourcing EM ( $\beta = 0.864$ ,  $P < 0.01$ ). Companies that had offshored to Asian countries appear to be more likely to adopt offshore outsourcing ( $\beta = -1.884$ ,  $P < 0.01$ ). Finally, cultural distance has no significant effect on the offshoring EM.

#### 5. Discussion

The discussion of empirical results will be organised around the following main points:

**Table 5**  
Factors affecting the offshoring EM choice (outsourcing = 0; insourcing = 1).

	Offshoring entry mode	
	(N = 677)	
	Coefficient (b)	Std. error
Clothing	-1.656**	0.300
Electronics	-0.111	0.278
Mechanical	0.352	0.303
Automotive	-0.647*	0.325
Large	0.864**	0.202
Home US	-0.100	0.224
Host Asia	-1.884**	0.256
Cultural distance	0.009	0.017
Constant	1.527***	0.312
-2 log likelihood	632.356	
Cox and Snell R <sup>2</sup>	0.254	
Nagelkerke R <sup>2</sup>	0.346	

\* p < 0.05.

\*\* p < 0.01.

\*\*\* p < 0.001.

The factors explaining the reshoring EM;  
The comparison between factors influencing the offshoring and the reshoring EM.

### 5.1. The reshoring EM determinants

#### 5.1.1. Path dependence effects

Overall, our empirical results offer support for the reshoring EM's dependence on previous EM choices (Shaver, 2013), given that about ¾ of reshoring firms retain the same mode they had offshore, and only ¼ switch mode, as shown in Fig. 3. However, inspection of Gray et al.'s (2013) matrix reveals that rather than a generalised stability of EMs, there is a "selective path dependence". This conclusion stems from the finding that a captive EM is very seldom changed, whereas offshore outsourcing is equally likely to be followed by reshoring outsourcing or insourcing. Out of 402 reshoring cases that adopted an equity EM in the offshore location, only three switched to a non-captive mode in reshoring.

The continuity of equity modes across locations may stem from the sunk costs of physical investment. In fact, equity EMs involve greater control but also greater fixed investment with respect to non-equity modes (Anderson and Gatignon, 1986), especially in sectors characterised by physical asset intensity. However, more convincing explanations for the stability of the equity EM can be found in the idea of ownership and internalisation advantages provided by the OLI theory. In OLI, ownership advantages (grounded in RBV) reflect the resources and capabilities that confer competitive advantages to the firm (Dunning, 1980, 1988). Internalisation advantages persist whenever the equity EM allows protecting distinctive resources owned by the firm across different locations (e.g., patents, proprietary production processes). Further, linking OLI to the learning and organisational capabilities perspective and to dynamic resource accumulation (Dunning, 2000; Teece et al., 1997), one can argue that over time, foreign plants accumulate knowledge and experience in offshore locations, leading to the development of routines and internal processes that form the basis of the firm's skills and dynamic capabilities.

The dynamic resources discussed above explain why, in a relocation, the firm may envisage internalisation advantages that lead it to opt for an equity EM. Learned capabilities and routines cannot be emulated by markets, and constitute advantages that would be lost if the EM is switched to outsourcing mode (Dunning, 2000). Therefore, these capabilities favour the persistence of insourcing, especially when they can be moved to the new location at low cost. Further, consistent with the path dependence theory (Hutzschenreuter et al., 2007), learned skills offshore may generate new distinctive competences

embedded in firm's internal processes.

While the above arguments apply to any generic relocation, one should question whether there are specific internalisation advantages that pertain to reshoring, and which may explain why not only firms that had chosen an equity EM offshore but also half of those who had adopted offshore outsourcing switch to insourcing mode in reshoring. Orthodox internalisation theory argues that coordination and transactional benefits in terms of scale/scope economies arise from jointly undertaking related value chain activities such as R&D, production or marketing. However, our data do not provide any evidence of a significant relationship between the motivation of relocating production closer to R&D and the reshoring entry mode. This might be due to the fact that this motivation might be difficult to be captured through secondary data, since companies tend to quote the main motivations for the relocation. To illustrate, companies most frequently quoted the improved design of products or the need to lower costs rather than the proximity between R&D and production, which might be seen as an intermediate outcome. Further, the data does not allow considering other possible linkages of production (e.g., with R&D, marketing, suppliers, users; Gassmann, 2006; Rothwell and Dodgson, 1991). Therefore, future research on these aspects is needed.

Very few firms switched from an offshore insourcing to a reshore outsourcing EM. Interestingly, they all represent cases of absence of in-house production capacity in the home country. For illustration, we discuss the reshoring EM strategies followed by two of them, Geox and Piombo. Geox, a well-known global brand in the footwear sector, though legally an Italian company, has never produced in own sites in Italy. Since its onset, the firm produced offshore either through external suppliers or in foreign plants, these latter often heavily subsidised by local governments (e.g., Serbia). Reshoring of some of the footwear lines back to Italy did not necessitate a strong degree of control and could be implemented through external suppliers, due to a longstanding footwear manufacturing tradition and the presence of several footwear industrial clusters. At the same time, the lack of subsidies for the creation of own production sites may have also played a role in discouraging the adoption of an insourcing EM in Italy. In the same vein, Piombo, now a brand of the luxury fashion company Ermenegildo Zegna, is being relocated in Italy by exploiting the cluster economies of the Zegna's fashion district in Piedmont, Italy. As for Geox, Piombo had not previously produced in own plants in Italy. Therefore, both cases seem to suggest that the switch from offshore insourcing to reshore outsourcing is possible, though restricted to instances in which the company can leverage on the competences of specialised industrial clusters while not having an own production base at home.

#### 5.1.2. Explanatory factors of the EM switch

Our empirical study has adopted a multi-level approach (Luo, 2001), in order to investigate the impact of country-, industry-, firm-, and project-specific variables on the likelihood that the offshore outsourcing EM is switched to insourcing (Table 4). While the insourcing mode in the offshore location is always replicated in the domestic location, outsourcing is more easily switched to insourcing. From the perspectives of TCT and RBV, the switch from outsourcing to insourcing is more likely when market transaction and coordination costs in the home country exceed those from internalisation. This may hold when finding suppliers in the home country is an issue, either because asset specificity is high (McIvor, 2009) or because competences sought are no longer available in the domestic environment (Di Mauro et al., 2018). Further, as already argued in the previous section, insourcing production may minimise coordination costs whenever significant development-production or production-marketing linkages exist within the firm's value chain (Ketokivi et al., 2017).

In terms of industry-level effects, clothing is unlikely to switch to insourcing. This finding has both technological and market explanations. Clothing is traditionally a footloose industry that frequently changes the location of operations in response to lower production

costs. The relatively low technological content, together with the wide diffusion of textile production technologies and competences, determines low asset specificity and makes it easy to find outsourcing solutions. At the same time, the short product life cycle and the need for mix and volume flexibility promote non-captive solutions. Apart from clothing, no other sector displays a specific tendency to stay or to switch from outsourcing to insourcing.

Concerning reshoring motivations, the only one associated with a switch from outsourcing to insourcing is the provision of government incentives. A possible explanation is that reshoring firms use subsidies to introduce new technologies (e.g., automation) (Arlbjørn and Mikkelsen, 2014; Ancarani and Di Mauro, 2018), which may lead to ownership and internalisation advantages. On the other hand, if governmental subsidies to companies are tied to employment creation, they may be granted only if new jobs are created in-house (Fratocchi et al., 2015).

Other reshoring key drivers identified in the literature – such as the rise of total costs in the offshore location, the need to increase proximity to customers, the need to improve production quality – are not significant in terms of internalisation advantages. In particular, although quality control issues have often been recognised as a key motivation of reshoring, especially in the textile industry (Robinson and Hsieh, 2016), we did not find any evidence that quality issues with offshore production determine a switch from outsourcing to insourcing. The quality gaps between productions seem to be linked to the location of the production sites, and not to their ownership. Tight control and insourcing may become necessary only when the quality improvement requires a close coordination between production and R&D, as shown by previous research (Di Mauro et al., 2018; Ketokivi et al., 2017).

## 5.2. Comparison of factors influencing the offshoring and the reshoring EM

By comparing statistically significant variables in the reshoring and offshoring EM equations (Tables 3 and 5 respectively), we are able to throw light on the differential impact of industry-, firm- and country-specific variables on the reshoring and offshoring EMs respectively. For the sake of comparability, we search for differences between Model 1 in Table 3 and 5, which include the same explanatory variables.

As far as the variables related to the offshoring EM are concerned, our results (Table 5) show significant sectoral influences: in the offshore location, outsourcing is favoured in automotive and clothing, a result in line with recent studies (e.g., Ciravegna et al., 2013). For clothing, as already argued, the relatively low technology content, value added at the production stage, and asset specificity jointly make for easiness of outsourcing solutions (Mudambi, 2008).

Outsourcing has heavily characterised the automotive sector ever since the eighties, when vehicle manufacturers began expanding the range of components outsourced following the diffusion of the Toyota model of manufacturing. Increasing collaboration between buyers and suppliers further entailed benefits from spatial proximity (Schmitt and Van Biesebroeck, 2013). Consequently, the relocation offshore of car manufacturers and the opening of new assembly plants was coupled with the extensive use of suppliers relocating offshore and the creation of geographic clusters of companies operating in the same supply chain (Bilbao-Ubillos and Camino-Beldarrain, 2008). Though the reshoring of some car manufacturers to the West has certainly not overturned the industry model of a vertical disintegrated supply chain, the strength of outsourcing processes has partly been offset by the availability of spare production capacity in Western (home) countries due to the post 2008 global crisis, and by rationalization and consolidation processes (Frigant and Zumpe, 2017).

Conversely, we find that only clothing is associated to non-captive solutions when the company relocates domestically. This persistence likely reflects the characteristic of many apparel and textile brands, which essentially provide design, styling, distribution and marketing for goods that are manufactured by external suppliers. The repatriation

of production therefore entails de facto switching from offshore to domestic suppliers.

Results also reveal a significant firm size effect both in the offshoring and in the reshoring EM choice: SMEs tend to choose non-equity EMs because of the higher perceived environmental uncertainty (Bradley and Gannon, 2000; Brouthers and Nakos, 2004), weaker capabilities and lower resource availability, when compared to large firms (Li and Qian, 2008).

As far as country-specific factors are concerned, the country where the company headquarters is located has no effect on the EM choice, despite relevant differences between US- and EU-based companies in terms of organisational archetypes have been highlighted in the literature (Bartlett and Ghoshal, 1989; Nurdin, 2011). As for the country where production was offshored, Asian locations are more likely to be associated with offshore outsourcing (Sturgeon, 2002). This finding is in line with Brouthers (2002), who shows that firms entering countries with legal restrictions on EMs (such as China) tend to use non-equity EMs. In addition, the preference for non-captive, lower commitment solutions may partly reflect the extent of the “liability of foreignness” that Western companies feel with respect to Asia (Zaheer, 1995). In fact, firms establishing their operations in China and the Far East may incur higher costs with respect to a local firm stemming from spatial distance (e.g., travel costs, transport, coordination and monitoring across time zones) and from lack of familiarity with the local business and institutional environment. From this perspective, our findings support previous research (Arora and Fosfuri, 2000; Hennart and Larimo, 1998; Kogut and Singh, 1988) that finds that firms tend to select non-equity EMs when perceived distance is high.

## 5.3. Is there a dominant reshoring entry mode?

Focusing on the frequency of the different reshoring EMs, our results show that over three quarters of reshoring firms adopt a captive mode, thereby prompting the question of whether reshored manufacturing requires a higher degree of control and vertical integration.

A first motivation for the dominance of the captive mode can be found in the availability of production capacity in the home country, in some instances enhanced by the untapped capacity created by the global economic crisis.

Next, according to internationalisation theory (Johanson and Vahlne, 1977), firms generally adopt more involved EMs as they gain international experience. As already argued above, learned skills and routines may explain why the insourcing entry mode is replicated at home (Teece et al., 1997), with the aim to expand the portfolio of capabilities of the company.

Another fact is that many reshoring projects are tied to product innovation strategies, involving coupled processes between production and development (Ketokivi et al., 2017). These linkages economies are often best exploited in an intra-firm mode, especially when the effort of finding a suitable new supplier has to be tackled alongside the other difficulties involved in relocating.

Finally, insourcing in reshoring may not be the result of managerial intentionality but may instead represent the only available choice when offshoring has led to the destruction of the supply chain at home.

## 6. Conclusion, limitations and future research

Our study contributes to the scientific debate in three significant ways. First, our results confirm the multi-level nature of EM determinants (industry, firm, country and project-specific levels) already highlighted by previous research. The study extends the existing knowledge offering a holistic view, i.e., analysing these factors jointly and so providing a better understanding of the determinants of EM choices. Second, we extend the literature concerning the EM, by analysing these decisions in reshoring projects. Third, by investigating the effect of offshoring EM choice on the subsequent reshoring EM choice,

we empirically contribute to a deeper understanding of firms' EM evolution, considered as dynamic processes.

As far as the implications for practice are concerned, this study can help practitioners in implementing more informed reshoring decisions, by carefully evaluating previous offshoring steps. The results concerning the determinants of reshoring EM show that only industry factors and reshoring motivations (i.e., government incentive) are statistically significant. Therefore, managers should carefully take into account the specialisation of business and the interdependency between business and local policies when planning reshoring EM strategy.

We acknowledge some limitations in this study. First, some of the reshoring EM data are collected with respect to the reshoring project announcement. In a few of these cases, the EM reported in the announcement could have been changed during the implementation process.<sup>1</sup> Second, while our results provide a clear-cut illustration of the stability of captive EMs, it is more difficult to develop a normative evaluation of the path-dependence. The stability of EM may be a rational decision in response to the full evaluation of risks and returns from alternative EMs (Luo, 2001) or may reflect sub-optimal inertia in decision-making, for instance explained by company culture or by the characteristics of the management team (Hambrick and Mason, 1984). In order to gain understanding as to whether the stability of EM represents a rational decision or is rather the result of inertia, it would be necessary to cleanse the EM from the effect of factors that are bound to affect groups of firms in the same way, and which may be constant across time and locations (e.g., structural industry factors). Third, this study analysed a limited set of (available) variables, future research could consider some other variables or moderators (e.g., home plant) that were neglected in this research.

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<sup>1</sup> However, a check through phone interviews on a sub-sample composed by 49 reshoring cases show that in 44 cases the EM was not changed (in the remaining cases no response was given).

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